

A. Permit Certificate

**MUNICIPAL
WASTEWATER REUSE PERMIT
LA-000211-02**

Avimor Subdivision No. 1

SunCor Idaho, Inc., LOCATED AT **485 East Riverside Drive, Suite 300, Eagle, ID 83616**, IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE WASTEWATER REUSE RULES (IDAPA 58.01.17) AND WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT, APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON **[5 years from final issuance date]**.

Pete Wagner
Boise Regional Office Administrator
Idaho Department of Environmental Quality

Date

**DEPARTMENT OF ENVIRONMENTAL QUALITY
1445 North Orchard
Boise, Idaho 83706-2239
(208) 373-0550**

POSTING ON SITE RECOMMENDED

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The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000211-02 and are enforceable as such. This permit does not relieve SunCor Idaho, Inc., hereafter referred to as SunCor or the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practice(s)
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – May 1 through October 31 (184 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 “Ground Water Quality Rule”
Guidance	Guidance for the Reclamation and Reuse of Municipal and Industrial Wastewater, DEQ
HLR _{gs}	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to land application hydraulic management units during the growing season. The HLR _{gs} limit is specified in Section F. Permit Limits and Conditions.
HLR _{ngs}	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLR _{ngs} limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	<p>Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop, and calculated monthly during the growing season (GS). Calculation methodology for the IWR can be found at the following website: http://www.kimberly.uidaho.edu/water/appndxet/index.shtml. The equation used to calculate the IWR at this website is:</p> $IWR = (CU - P_e) / E_i$ <p>CU is the monthly consumptive use for a given crop in a given climatic area. CU is synonymous with crop evapotranspiration</p> <p>P_e is the effective precipitation. CU minus P_e is synonymous with the net irrigation requirement (IR)</p> <p>E_i is the irrigation system efficiency. To obtain the gross irrigation water requirement (IWR), divide the IR by the irrigation system efficiency.</p>
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MBR	Membrane Bioreactor
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – November 1 through April 31 (181 days)
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation
Reuse	The use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, aquifer recharge, use in surface water features, toilet flushing in commercial buildings, dust control, and other uses.
Reuse Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year (i.e., November 01 – October 31). For example, the 2000 Reporting Year was November 01, 1999 through October 31, 2000.
SAR	Sodium Absorption Ratio
SI	Supplemental Irrigation water applied to the land application treatment site.

C. Abbreviations, Definitions

Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
SunCor or permittee	SunCor Idaho, Inc
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 <i>Water Quality Standards</i> .
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WW	Wastewater applied to the land application treatment site

D. Facility Information

Legal Name of Permittee	SunCor Idaho, Inc.
Type of Wastewater	Class B Municipal Wastewater
Method of Treatment	Primary screening; conventional activated sludge with biological nutrient removal, chemical phosphorous reduction, and membrane solids separation (i.e., membrane bioreactor or MBR); chlorination; and rapid infiltration and/or slow rate land application. Aerated sludge tank for storage and treatment of biosolids.
Type of Facility	Private
Facility Location	Approximately 10 miles north of Eagle, Idaho, to the east of State Highway 55
Legal Location	Township 5N, Range 1W, Sections 10, 13, 14, 15, 22, 26, and 27 Township 5N, Range 1E, Sections 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 17, 18, 19, 20, and 24 Township 5N, Range 2E, Sections 6, 7, 8, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30
County	Ada and Boise
USGS Quad	Pearl and Cartwright Canyon
Soils on Site	0 – 9”: Loam 9 – 60”: Stratified fine sandy loam to clay
Depth to Ground Water	Variable (6-90 feet below ground surface)
Beneficial Uses of Ground Water	Domestic, agriculture
Nearest Surface Waters	<ul style="list-style-type: none"> • Spring Valley Creek, adjacent to western property boundary. • North Fork of Spring Valley Creek, which crosses the site from east to west where it drains into the main channel of Spring Valley Creek. • An ephemeral tributary south of North Fork of Spring Valley Creek, roughly parallel to the North Fork channel and also draining into the main channel on the western side of the site.
Beneficial Uses of Surface Waters	Cold Water Aquatic Life, Primary or Secondary Recreation
Responsible Official Mailing Address Phone	Kevin Wentland, V.P. Land Development SunCor Idaho, Inc. 485 E. Riverside Dr., Suite 300 Eagle, ID 83616 (208) 939-0343

E. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by DEQ in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-211-01 Plan of Operation Updated Plan of Operation due 60 days after one complete year of operation of reuse facilities	<p>An updated Plan of Operation (Operation and Maintenance Manual or O&M Manual) for the wastewater treatment and reuse facilities, incorporating the requirements of this permit, shall be submitted to DEQ for review and approval within 60 days after one complete year of operation of the reuse facilities. For purposes of this permit term, the start of operation is considered to be the time of initial effluent discharge from the treatment facility.</p> <p>The Plan of Operation shall be designed for use as an operator guide for actual day-to-day operations to meet permit requirements and shall include sampling and monitoring requirements to insure proper operation of the wastewater treatment, infiltration basin, and reuse facilities. The Plan of Operation shall specifically include or address the following bullet items.</p> <ul style="list-style-type: none"> • Operating procedures for the infiltration basin. • Operating procedures for periods of shutdown and low flows to the wastewater treatment and reuse system. • A description of approved sample collection methods, appropriate analytical methods, and companion quality control/assurance (QA/QC) protocols. • Specific design considerations, operation and maintenance procedures, and management practices to be employed to minimize the potential for or limit odors. The plan shall also include procedures to respond to an odor incident if one occurs, including notification procedures. <p>Upon approval, the updated Plan of Operation shall be incorporated by reference into this permit and shall be enforceable as a part of this permit.</p>
CA-211-02 Plans and Specifications for Proposed Reuse Systems Prior to construction and/or application of wastewater	<p>Submit plans and specifications for the slow rate land application systems (i.e., Agricultural Areas) for DEQ review and approval prior to construction and/or application of any wastewater. The plans for the reuse systems shall clearly delineate the locations of all potable water lines, existing and proposed wells, and surface waters, sufficient to assess/establish compliance with the buffer zone requirements of this permit.</p>
CA-211-06 Wastewater Treatment System Effluent to RI System, Total Phosphorus Limit 60 days after final issuance of the Phosphorous Total Maximum Daily Load (TMDL) for the Lower Boise River	<p>Submit a proposal for managing treated effluent discharged to the RI system in light of the load allocation contained in the final TMDL for the Lower Boise River. This proposal shall identify and discuss TMDL requirements that are applicable to Avimor's facility and/or operations, and will propose operational requirements and methodologies sufficient to meet and demonstrate compliance with such requirements. Upon review of this proposal, DEQ will modify the wastewater reuse permit as needed to incorporate the proposal in a manner that will satisfy the requirements of the TMDL.</p>

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
CA-211-08 Permit Renewal Application Six months prior to permit expiration date	Submit an application package to DEQ for permit renewal.

F. Permit Limits and Conditions

The permittee is allowed to apply wastewater and treat it on reuse sites as prescribed in the tables below and in accordance with all other applicable permit conditions and schedules.

Category	Permit Limits and Conditions	
	Agricultural and Irrigation Areas	Rapid Infiltration System
Type of Wastewater	Class B Municipal Wastewater	Class B Municipal Wastewater
Reporting Year for Annual Loading Rates	January 1 through December 31	January 1 through December 31
Application Site Area	Agricultural Areas: 148 acres Irrigation Areas: To be determined	Not applicable
Application Season	May 1 through October 31	Year-round
Hydraulic Loading Rate Limit, each Hydraulic Management Unit (HMU)	<p>Growing Season (GS) Hydraulic Loading Rate shall be no greater than the Irrigation Water Requirement (IWR) using data from the tables of the following University of Idaho web site: http://www.kimberly.uidaho.edu/water/appndxet/index.shtml.</p> <p>IWR is equal to the Mean IR data from these tables divided by the irrigation system efficiency.</p> <p>In lieu of these tables, current climatic and evaporation data, or 30-year average data may be used to calculate the IWR, as defined in the Guidance.</p> <p>NOTE: No non-growing season application is allowed on these sites. The hydraulic limit includes treated wastewater <u>and</u> supplemental irrigation water applied onsite.</p>	<p>Up to 0.19 million gallons per day</p> <p>NOTE: This limit only applies to treated wastewater; no irrigation water will be applied to the RI system.</p>
Maximum Nitrogen Loading Rate Limit, pounds/acre-day, each HMU	<p>150% of typical crop uptake (refer to definition in Section C of this permit)</p> <p>NOTE: includes all sources including waste solids and supplemental fertilizers</p>	Refer to Wastewater Treatment System Effluent, Total Nitrogen Limit
Wastewater Treatment System Effluent, Biological Oxygen Demand (BOD ₅) Limit, mg/L	Monthly average shall not exceed 5.0 mg/L	Monthly average shall not exceed 5.0 mg/L

F. Permit Limits and Conditions

Category	Permit Limits and Conditions	
	Agricultural and Irrigation Areas	Rapid Infiltration System
Wastewater Treatment System Effluent, Total Nitrogen (Total Kjeldahl Nitrogen + Nitrate-N + Nitrite-N) Limit, mg/L	Refer to Maximum Nitrogen Loading Rate Limit	Monthly average shall not exceed 8.0 mg/L
Wastewater Treatment System Effluent, Total Phosphorus Limit, mg/L	None	Monthly average shall not exceed 0.2 mg/L NOTE: This limit may be modified by Compliance Activity CA-211-06.
Wastewater Treatment System Effluent, Turbidity Limit, NTUs	Instantaneous maximum shall not exceed 5 NTU 24-hour average shall not exceed 2 NTU	Instantaneous maximum shall not exceed 5 NTU 24-hour average shall not exceed 2 NTU
Wastewater Treatment Effluent discharged from chlorination tank, Total Coliform Limit, CFU/100 mL	The median number of total coliform organisms shall not exceed 2.2 per 100 milliliters, as determined from the results of the last seven (7) days for which analyses have been completed. In addition, the number of total coliform shall not exceed 23 per 100 milliliters in any confirmed sample.	The median number of total coliform organisms shall not exceed 2.2 per 100 milliliters, as determined from the results of the last seven (7) days for which analyses have been completed. In addition, the number of total coliform shall not exceed 23 per 100 milliliters in any confirmed sample.
Wastewater Treatment Effluent discharged from chlorination tank, Chlorine Residual, mg/L	Minimum free chlorine residual of 1 mg/L	Minimum free chlorine residual of 1 mg/L
Runoff/Wellhead Protection Requirements	The permittee shall manage the reuse sites in accordance with the approved Runoff Management Plan. To prevent runoff from the reuse sites, BMPs shall be used around all areas where runoff may potentially occur. Berms and other BMPs shall be used to protect the wellhead of on-site wells. New BMPs shall be reviewed and approved by DEQ prior to implementation.	Not applicable

F. Permit Limits and Conditions

Category	Permit Limits and Conditions	
	Agricultural and Irrigation Areas	Rapid Infiltration System
Buffer Zones	<p>The following minimum distances shall be provided between the buffer objects listed below and each HMU:</p> <ul style="list-style-type: none"> • Public Access Areas: 0 feet • Waters of the United States, including designated wetlands: 10 feet (mitigation measures to prevent runoff to surface waters shall be employed) • Inhabited Dwellings: 100 feet or as specified on Figure A4 in Appendix 2 of this permit • Irrigation Water Wells: 100 feet • Domestic Water Wells: 500 feet • Municipal Water Wells: Site specific (requires DEQ plan and specifications review prior to construction) 	<p>The following minimum distances shall be provided between the buffer objects listed below and the perimeter of the RI system site:</p> <ul style="list-style-type: none"> • Public Access Areas: 0 feet • Waters of the United States, including designated wetlands: 10 feet (mitigation measures to prevent runoff to surface waters shall be employed) • Inhabited Dwellings: 100 feet • Irrigation Water Wells: 100 feet • Domestic Water Wells: 500 feet • Municipal Water Wells: Site specific (requires DEQ plan and specifications review prior to construction)
Posting	<p>Warning signs shall be placed at each corner and at 500 foot intervals around each HMU, as applicable. The signs shall read “Irrigated with Reclaimed Wastewater – Do Not Drink”, or equivalent.</p>	<p>Fencing is required around the perimeter of the RI system site. Warning signs shall be placed at each corner and at 500 foot intervals around the perimeter of the RI system site. The signs shall read “Irrigated with Reclaimed Wastewater – Do Not Drink”, or equivalent.</p>
Irrigation Scheduling	<p>Irrigation shall occur during periods of non-use by the public</p>	<p>Not applicable</p>
Crop Management and Grazing Requirements	<p>Grass clippings generated during mowing events, or similar field maintenance activities, shall be immediately collected and removed from each HMU.</p> <p>A grazing management plan shall be submitted to DEQ for review and approval prior to any grazing activities.</p>	<p>Not applicable</p>

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
	The requirements below apply to both Agricultural and Rapid Infiltration Systems
Wastewater Treatment and Reuse System Operation	The wastewater treatment facility and reuse systems shall be operated by personnel certified and licensed in the State of Idaho wastewater operator training program at the operator class level specified in IDAPA 58.01.16.203 of the <i>Wastewater Rules</i> , and properly trained to operate and maintain the system. Operation of the wastewater treatment system shall be monitored on a 24-hour basis for alarm conditions, including notification of the qualified operating personnel under alarm conditions.
Wastewater Treatment Facility and Effluent Distribution System Posting	Signs reading “Wastewater Treatment Facility”, or equivalent, shall be posted on all four sides of fencing around the wastewater treatment facilities site. All irrigation risers, boxes, and meters in the effluent distribution system shall be lockable or have restricted access to prevent unauthorized use. Warning signs shall be placed at access points reading “System Contains Reclaimed Wastewater – Do Not Drink”, or equivalent.
Ground Water Quality	Wastewater reuse activities conducted by the permittee shall not cause a violation of the <i>Ground Water Quality Rule</i> , IDAPA 58.01.11.
Odor Management	The wastewater treatment and reuse facilities shall not create a public health hazard or nuisance conditions, including odors.
Supplemental Irrigation Water Protection	For systems with wastewater and fresh irrigation water interconnections, DEQ-approved backflow prevention devices are required for protection of fresh irrigation water sources.
Construction Plans	Prior to construction, modification, or expansion of any wastewater facilities associated with the reuse systems, detailed plans and specifications shall be submitted and approved by DEQ. Within 30 days of completion of construction, the permittee shall submit as-built plans for DEQ review and approval.

G. Monitoring Requirements

1. Appropriate analytical methods, as given in the Idaho Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater, or as approved by DEQ, shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Plan of Operation, as required by Compliance Activity No. CA-211-01 in Section E of this permit.
2. The permittee shall monitor and measure parameters as stated in the Facility Monitoring Tables in this section.
3. Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
4. Unless otherwise agreed to in writing by the DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Tables on the following pages. Monitoring is required at the frequency shown in the tables below if wastewater or non-contact cooling water is applied anytime during the time period shown.
5. Ten (10) soil sample locations shall be selected for each management unit with greater than fifteen acres and Five (5) soil sample locations shall be selected for each management unit with fifteen acres or less. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches. The soil samples collected at each depth shall be composited to yield three (3) samples for analysis from each management unit.
6. Ground water monitoring wells shall be purged a minimum of three casing volumes, or until field measurements for pH, specific conductance and temperature meet the following conditions: two successive temperature values measured at least five minutes apart are within one degree Celsius of each other, pH values for two successive measurements measured at least five minutes apart are within 0.2 units of each other, and two successive specific conductance values measured at least five minutes apart are within 10% of each other. This procedure will determine when the wells are suitable for sampling for constituents required by the permit. Other procedures, such as low flow sampling, may be considered by DEQ for approval. The static water level shall be measured prior to pumping or sampling for ground water.
7. Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.

Facility Monitoring Table, Agricultural and Irrigation Areas

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Daily	Influent sewage, sewer influent pump station flow meter (WW-021101)	Volumetric flow rate of sewage into treatment system	Gallons/day
Monthly	Influent sewage, equalization basin (WW-021102)	24-hour composite sample	5-day Biological Oxygen Demand (BOD ₅)
Continuous	MBR effluent, prior to chlorination (WW-021103)	Instantaneous and 24-hour average, in-line analyzer and recorder	Turbidity in NTU

G. Monitoring Requirements

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Daily, when using supplemental irrigation water	Flow meter or pump run time	Volumetric flow rate of supplemental irrigation water to each HMU	Gallons/week, gallons/month, and acre-inches/month applied to each HMU
Daily, when irrigating with reclaimed wastewater	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	Volumetric flow rate of reclaimed wastewater to each HMU	Gallons/day, gallons/month, and acre-inches/month applied to each HMU
Daily, when irrigating with reclaimed wastewater	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	Grab sample	Total coliform
Monthly	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	24-hour composite sample	Chemical Oxygen Demand (COD), BOD ₅ , total Kjeldahl nitrogen, nitrate-nitrogen, ammonia, total phosphorus, and free chlorine residual
Twice per year, April and November	Ground water monitoring wells	Grab sample, see Note 6	Total coliform, total Kjeldahl nitrogen, nitrate-nitrogen, ammonia, total phosphorous, total dissolved solids (TDS), chloride, water table elevation, water table depth
Annually	Each HMU	Calculate Irrigation Water Requirement (IWR)	Volume (inches/acre and total gallons) for each month of application season
Annually	Each HMU	Acres used for the reuse of reclaimed wastewater each year	Acres Note: In the event that only a portion of an HMU is used, submit site plan showing areas used within the HMU and quantify the acreage.
Annually	Each HMU	Calculate and report total nitrogen, total phosphorus, and COD loading from reclaimed wastewater and fertilizer applications	Nitrogen, phosphorus, and COD applied in lbs/acre-year
Annually	Each HMU	Calculate and report crop nitrogen and phosphorous removal	Nitrogen and phosphorous removed in lbs/acre-year and provide basis for calculations
Annually, November	Agricultural Areas, Each Soil Monitoring Unit (SMU)	Composite soil sample, see Note 5	Electrical conductivity, nitrate- nitrogen, ammonium nitrogen, pH, and plant available phosphorous

G. Monitoring Requirements

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Annually	All supplemental irrigation pumps directly connected to the wastewater distribution system.	Backflow testing	Document the testing of all backflow prevention devices for all supplemental irrigation pumps directly connected to the wastewater distribution system(s). Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly.
Every two years, starting first year of permit	All flow measurement locations	Flow measurement calibration of all flows to each HMU	Document the flow measurement calibration of all flow meters and pumps used to measure all wastewater and supplemental irrigation water flows applied to each HMU

Facility Monitoring Table, Rapid Infiltration System

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Daily	Influent sewage, sewer influent pump station flow meter (WW-021101)	Volumetric flow rate of sewage into treatment system	Gallons/day
Monthly	Influent sewage, equalization basin (WW-021102)	24-hour composite sample	BOD ₅
Continuous	MBR effluent, prior to chlorination (WW-021103)	Instantaneous and 24-hour average, in-line analyzer and recorder	Turbidity in NTU
Daily, when discharging to RI system	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	Volumetric flow rate of reclaimed wastewater to the RI system	Gallons/day and gallons/month applied to the RI system
Daily, when discharging to RI system	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	Grab sample	Total coliform
Monthly	Reclaimed effluent, reuse pump station flow meter and sampler (WW-021104)	24-hour composite sample	Chemical Oxygen Demand (COD), BOD ₅ , total Kjeldahl nitrogen, nitrate-nitrogen, ammonia, total phosphorus, and free chlorine residual

G. Monitoring Requirements

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Twice per year, April and November	Ground water monitoring wells	Grab sample, see Note 6	Total coliform, total Kjeldahl nitrogen, nitrate-nitrogen, ammonia, total phosphorous, TDS, chloride, water table elevation, water table depth
Twice per year, April and November	Surface water monitoring locations	Grab sample	Ammonia, nitrate+nitrite, total Kjeldahl nitrogen, total phosphorous, dissolved orthophosphorous, chloride
Annually	RI system	Date(s) of usage for each infiltration cell in the RI system when used for disposal of reclaimed wastewater	Cell Number, dates of use
Every two years, starting first year of permit	All flow measurement locations	Flow measurement calibration of all flows to RI system	Document the flow measurement calibration of all flow meters and pumps used to measure all wastewater flows to the RI system

H. Standard Reporting Requirements

1. The permittee shall submit an Annual Wastewater Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year which shall cover the previous year (see section C for definition/dates of the Reuse Reporting Year). The Annual Report shall include results for monitoring required in Section G, status of compliance activities, and an interpretive discussion of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
2. The annual report shall contain the results of the required monitoring as described in Section G. Monitoring Requirements. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.
3. The annual report shall be submitted to the Engineering Manager at the following address.

Boise Regional Office
1445 N. Orchard
Boise, ID 83706-2239
208-373-0550

A copy of the annual report shall also be mailed to:

Richard Huddleston, P.E.
Wastewater Program Manager
1410 N. Hilton
Boise, ID 83706
208-373-0561
4. Notice of completion of any work described in Section E. Compliance Schedule for Required Activities shall be submitted to DEQ within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.
5. All laboratory reports containing the sample results for monitoring required by Section G. Monitoring Requirements of this permit shall be submitted with the Annual Report.

I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Rules for the Reclamation and Reuse of Municipal and Industrial Wastewater, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site unless permission has been obtained from the DEQ authorizing a discharge into the waters of the State as stated in IDAPA 58.01.02.600.02.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.02.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
 - a. Apply wastewater as evenly as practicable to the treatment area;
 - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
 - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. The permittee shall:
 - a. Manage the wastewater reuse site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
 - b. Not hydraulically overload any particular areas of the wastewater reuse site.
5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Rules for the Reclamation and Reuse of Municipal and Industrial Wastewater and include seepage tests on all lagoons per latest DEQ procedures.
7. The permittee shall allow the Director of DEQ, or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
 - a. Enter the permitted facility,
 - b. Inspect any records that must be kept under the conditions of the permit.
 - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
 - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
 - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
 - b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
 - c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

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- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:
 - i. A description of the non-compliance and its cause;
 - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and

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I. Standard Permit Conditions: Procedures and Reporting

iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.

- e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
- 9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
- 10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

J. Standard Permit Conditions: Modifications, Violations, and Revocations

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in I. Standard Reporting Requirements, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Rules for the Reclamation and Reuse of Municipal and Industrial Wastewater, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Rules for the Reclamation and Reuse of Municipal and Industrial Wastewater.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of the Department of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.
8. If, pursuant to Idaho Code § 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of the Department of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted wastewater reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the wastewater reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

Appendix 1

Environmental Monitoring Serial Numbers

HYDRAULIC MANAGEMENT UNITS

Serial Number	Description	Acres
MU-021101	Agricultural Area 1	23.4
MU-021102	Agricultural Area 2	27.9
MU-021103	Agricultural Area 3	28.9
MU-021104	Agricultural Area 4	6.8
MU-021105	Agricultural Area 5	10.2
MU-021106	Agricultural Area 6	6.5
MU-021107	Agricultural Area 7	2.9
MU-021108	Agricultural Area 8	1.6
MU-021109	Agricultural Area 9	1.9
MU-021110	Agricultural Area 10	3.3
MU-021111	Agricultural Area 11	7.1
MU-021112	Agricultural Area 12	16.2
MU-021113	Agricultural Area 13	11.4
MU-021114	Rapid Infiltration System	Not applicable
MU-021115	Irrigation Areas	To be determined

SOIL MONITORING UNITS

Serial Number	Description	Associated MU
SU-021101	Agricultural Area 1	MU-021101
SU-021102	Agricultural Area 2	MU-021102
SU-021103	Agricultural Area 3	MU-021103
SU-021104	Agricultural Area 4	MU-021104
SU-021105	Agricultural Area 5	MU-021105
SU-021106	Agricultural Area 6	MU-021106
SU-021107	Agricultural Area 7	MU-021107
SU-021108	Agricultural Area 8	MU-021108
SU-021109	Agricultural Area 9	MU-021109
SU-021110	Agricultural Area 10	MU-021110
SU-021111	Agricultural Area 11	MU-021111
SU-021112	Agricultural Area 12	MU-021112
SU-021113	Agricultural Area 13	MU-021113

Appendix 1
Environmental Monitoring Serial Numbers
WASTEWATER SAMPLING POINTS

Serial Number	Description
WW-021101	Influent sewage, sewer influent pump station flow meter
WW-021102	Influent sewage, equalization basin
WW-021103	MBR effluent, prior to chlorination
WW-021104	Reclaimed effluent, reuse pump station flow meter and sampler

SURFACE WATER MONITORING

Serial Number	Description/Location
SW-021101	WQ-1/Spring Valley Creek below Hwy 55 (downstream of development)
SW-021102	WQ-2/Spring Valley Creek upstream of Phase 1, below existing weir upstream of McLeod Way
SW-021103	WQ-3/Ephemeral drainage along Burnt Car Draw, downstream of Broken Horn Draw east of intersection of Avimor Drive and McQuarrie Way
SW-021104	WQ-4/Intermittent spring west of Rapid Infiltration System

GROUND WATER MONITORING

Serial Number	Description/Location
GW-021101	MW-1/West of Spring Valley Creek, near Avimor entrance
GW-021102	MW-6r/East of Spring Valley Creek and south of stormwater pond
GW-021103	RA-MW-7/Downgradient of Rapid Infiltration System
GW-021104	RA-MW-8/Upgradient of Rapid Infiltration System
GW-021105	RA-MW-9/Crossgradient of Rapid Infiltration System
GW-021106	RA-MW-10/Downgradient of Rapid Infiltration System
GW-021107	PA-MW-11/Downgradient of Rapid Infiltration System below intermittent spring

Site Maps

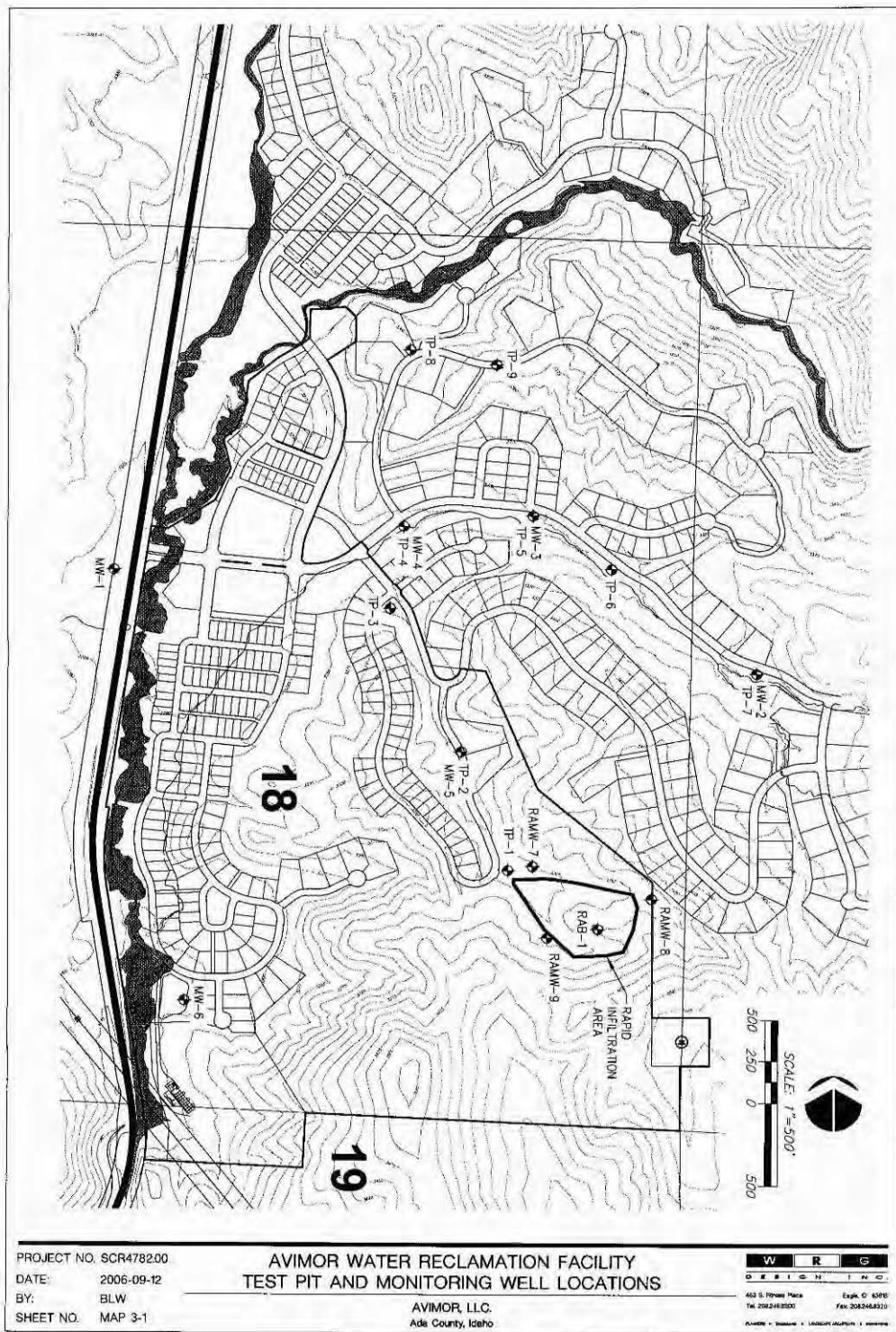


Figure A1: Site Layout and Rapid Infiltration Basin Location

Appendix 2 Site Maps

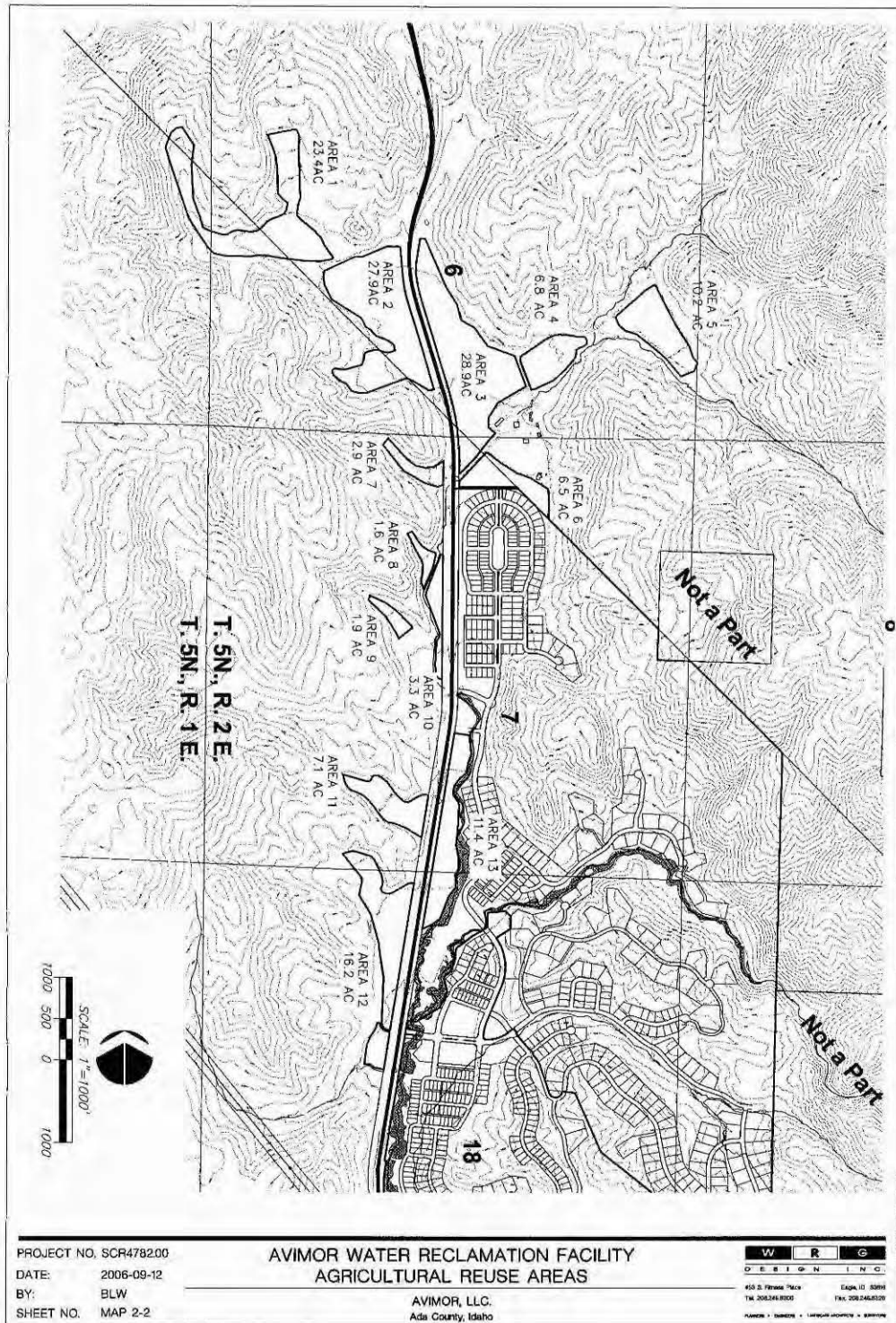


Figure A2: Agricultural Area Hydraulic Management Units

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Appendix 2
Site Maps

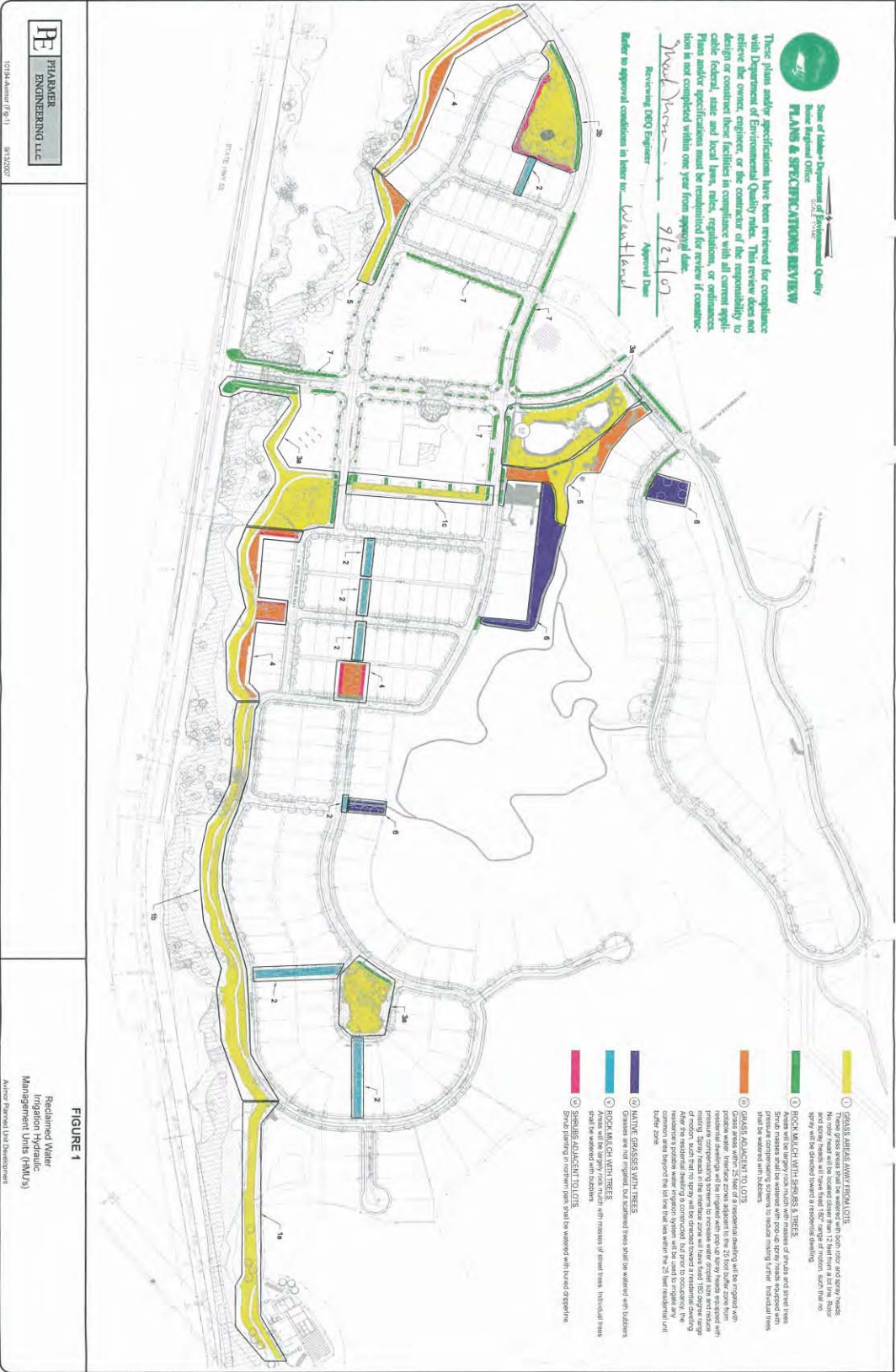


Figure A3: Irrigation Hydraulic Management Unit

Appendix 2
Site Maps

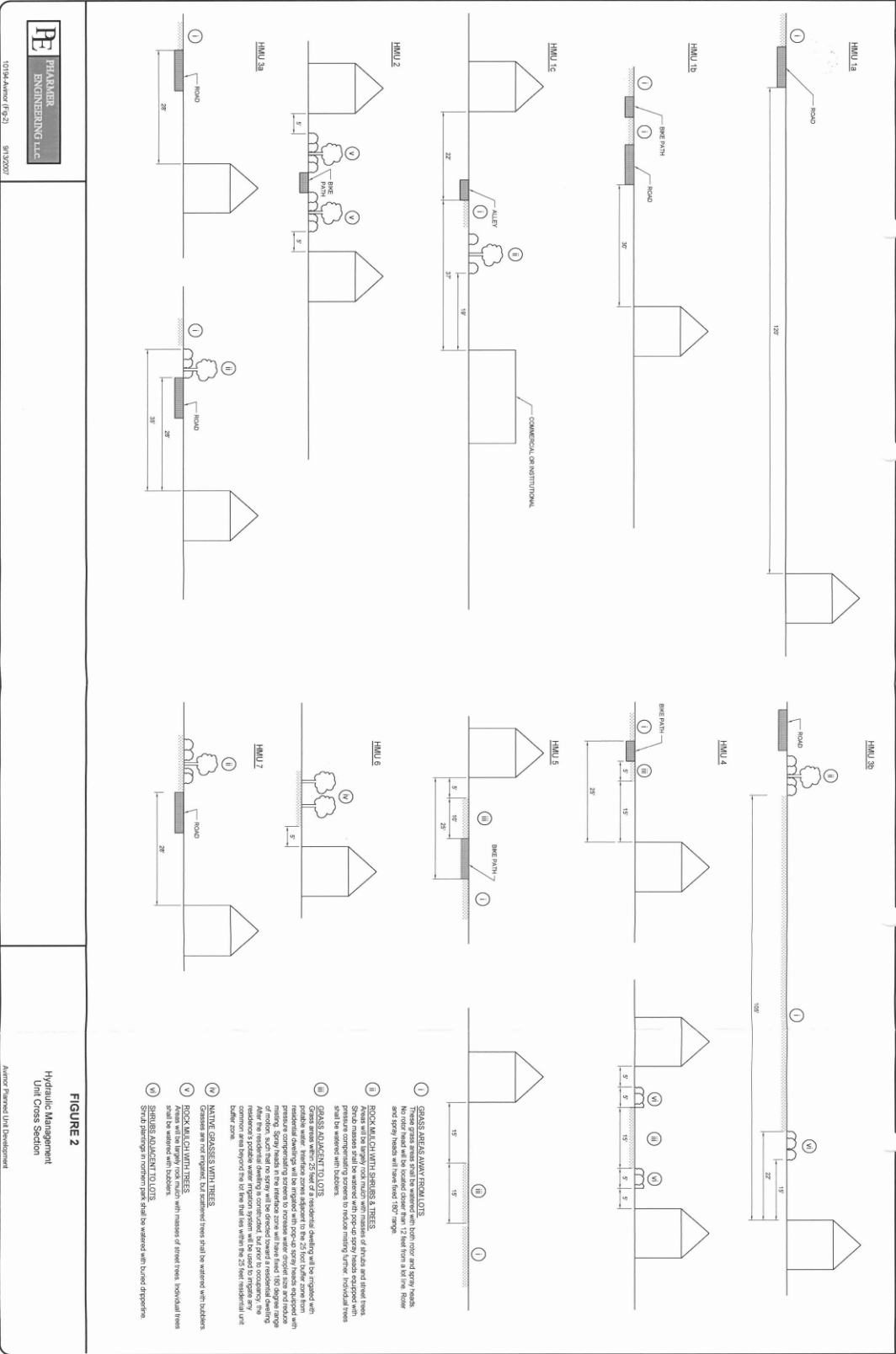


Figure A4: Typical Irrigation HMU Layout Design